1: Belgrave F-3 (no date) 1953 MZ2 Bahrain MZ2

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BAHRAIN AND ITS NEIGHBOURS

ment with launch or dhow owners, but it should be remembered that some of them are private property. Umm as-Sabaan is the private property of Mr. Max W. Thornberg, Jidda being a penal settlement, is forbidden ground, and Umm an-Nasaan may only be visited with permission of H.H. The Ruler. The others, the small islands south of Muharraq, Nebih Salih, Jezira and the Howar islands are free to all visitors and a visit to them makes a change from drives around the islands.

Transport in Bahrain includes both bus and taxi, the former are not the luxurious affairs seen in Europe and England but have wooden bodies built in Bahrain and attached to an imported chassis. Taxis, however, are not too expensive if care is taken to pay the correct fare which is recorded in a fare book that should be carried by every driver. It is rumoured that taxis will soon carry meters, which will certainly simplify matters, but till that happy day passengers who have complaints to make about being over-charged should make them to the Traffic Department of the State Police.

Petrol and oil are cheap in Bahrain, which is not surprising, and the import tax on cars and motor cycles is only 10%, so that to own and run a private car is cheaper than in England or the States, as many fortunate people have discovered. Most makes of cars are obtainable in Bahrain, garage facilities have increased and the improvement in the roads has enabled English cars to be used with comfort.

The old-fashioned form of transport in Bahrain was the donkey. It was used for every task, for bringing the produce of the country for sale in the town, for pulling carts and for riding. The white Bahrain donkeys used to be well known all over the Middle East and they were exported from Bahrain to places as far distant as the East African coast. Today buses are replacing donkeys, there are bus services between most of the villages, though many of the young men prefer to use bicycles. Lorries too have successfully competed with donkeys and now carry most of the goods between the towns and villages, but in the gardens and in the narrow country lanes one still meets many donkeys though few of the fine white beasts for which the islands were famous long ago. However, the donkey will never entirely die out, for he has certain advantages over other methods of transport, he can reproduce young donkeys, he can find his own way along small and narrow tracks in the gardens and he produces manure, which is a valuable commodity in Bahrain.

CHAPTER V

BAHRAIN'S OIL INDUSTRY

The man who was chiefly responsible for the discovery of Bahrain's oil resources was an Australian, Major Frank Holmes, who came to Bahrain on behalf of the Eastern and General Syndicate, a British prospecting company. Major Holmes, after drilling a number of artesian wells and thus discovering something about the composition

315 471 of the ground below the surface of Bahrain, believed that oil was present in the islands in commercial quantities and so obtained from the Ruler, on December 2nd, 1925, a prospecting concession which was to run for two years. During this period Holmes tried to interest British oil companies in the petroleum possibilities of Bahrain, but their experts declared that there was no oil in Bahrain and that it would be a poor gamble to start operations in that country. Finally Major Holmes went to the States and on November 30th, 1927, an American corporation, the Eastern Gulf Company, acquired a two years option. After negotiations which involved the Foreign Office and the State Department, for Bahrain was a protected State, and after discussions between various important oil interests, the Eastern Gulf Company assigned its option over the Bahrain concession to the Standard Oil Company of California. On August 1st, 1930 the concession was assigned by Standard Oil to its fully owned subsidiary, the Bahrain Petroleum Company Ltd. (BAPCO), which was registered in Canada in order to give it the status of a British company. Such are the politics of oil that it had taken five years for an oil company to be formed to develop Bahrain's oil, and had it not been for the enterprise of an American company, which took up the concession after it had been refused by the British, the oil of Bahrain might never have been exploited.

315 382 Directly the concession was signed, surveying and drilling operations were commenced and in 1932 the first well "came in." This well can be seen immediately south of Awali and is still producing. By 1935 there were sixteen producing wells and six more drilling. It was then decided that the crude oil should be processed in Bahrain, and in the following year the first small distillation unit was erected and put into operation. A year later the capacity of the refinery was expanded to 25,000 barrels a day. The refinery was continually enlarged and improved so that finally it was able to process more crude than was forthcoming from the Bahrain fields. A 12" pipeline was therefore laid from the Dammam field on the coast of Saudi Arabia to the refinery, a distance of 34 miles, of which 17 were under the sea, making it the longest private pipeline of its kind in the world. Having expanded the refinery it became necessary to improve the shipping facilities to speed the export of oil products so a three mile jetty was constructed from Sitra Island to the deep water, at the head of which a four berth pier was built to add to the existing two-berth island loading wharf. Rows of pipes carry crude oil and refined products to the waiting ships while huge freight trailers carry drums for bulk package loading. Each month 70-80 ocean vessels are alongside the wharves removing some 4½ million barrels of bulk exports and 60,000 drums of refined products and asphalt. The drums are made in the Sitra drum plant, manned entirely by Bahrainis.

At present the activities of the company are carried out in four parts of Bahrain, at Awali, at the Jebal, at the Refinery and on Sitra Island.

At Awali are the offices and the homes of the European employees of BAPCO, while outside the fence is the Arab camp for the few Bahrainis who prefer to live there rather than in their own towns and villages. Near Awali's eastern gate is the Training School for Bahrainis, where something is done to equip them for higher posts in the company. This is a field of activity which the company is beginning to develop and it is very important that is should succeed.

South of Awali, in the desert around the Jebal ad-Dukhan, is the oil field, the *raison d'etre* of BAPCO, an unimpressive area with many little squares of cement decorated with taps and valves and surrounded by low fences, which are the oil wells, while here and there derricks mark the search for more oil which is always in progress.

After the Abadan Refinery the one on Bahrain is the largest in the Middle East and supplies large quantities of refined products to India, Pakistan, East Africa and other countries "East of Suez." During the day it would be difficult to describe the refinery as anything but a large and ugly mass of iron and steel, with the great Cat. Cracker rising above the squat silver tanks. The air is hot and dusty and in the summer the iron-work is so hot that to touch it raises blisters ; but in the evening the refinery takes on the appearance of a slightly shapeless but nevertheless well decorated Christmas Tree, covered in lights and set against a background of flares of burning gas which illuminate the sky like a lurid orange back-cloth.

The Sitra anchorage has at all times an appearance of feverish activity, it is being improved so that it will be possible to load ships and tankers round the clock. In order to do this the jetty is being floodlit with great arc lamps.

On low-lying Sitra Island all that can be seen from the sea are the storage tanks, it is only on approaching nearer that the island itself becomes visible. The Tank Farm spreads across the middle of Sitra, and as it expands it threatens to cut the island in two. To the south of the Tank Farm is a large group of buildings from which a crashing sound is continually heard ; this is the Drum Plant. Further evidence of this is present in the thousands of newly painted drums that are piled in huge rows near the plant.

The oil industry is directed from the main office in Awali, where from air-conditioned coolness in the summer and air-conditioned warmth in the winter instructions go out to all parts of Bahrain where BAPCO has its installations. Bahrain is well situated for an oil industry. The oil wells are about eight miles from the Refinery, which itself is scarcely more than half that distance from the Pier and Tank Farm, while from Awali it is possible to see on a clear day both the Refinery and the Field. The radio-telephone and the aeroplane used in other Middle Eastern fields have no place in Bahrain where phones and cars are quite sufficent.

Of the 7,749 workers employed by BAPCO at the end of 1951, 4,937 were Bahrainis and 1,035 were British, American and other

464 Europeans. For the latter the company provides many amenities. In the town of Awali there is a cinema, a club and other recreational facilities. There is a Commissary for the supply of foods and goods unobtainable elsewhere in Bahrain; a school for American and European children with qualified teachers and hospitals for the various nationalities employed by BAPCO. A cinema, swimming bath and mosque are also being constructed in the Arab Camp, and a swimming bath and cinema in the Indian and Pakistani camp at Rifaa. The company also maintains dispensaries in some of the villages and has built three schools for the Bahrain Government. There is cordial co-operation between the Bahrain Government and BAPCO in all fields of social service and although it may seem strange that an oil company should be encouraged to occupy itself with so many activities not directly connected with the production of oil, yet it is now recognised in the Middle East that it is an obligation of oil companies not only to work for their shareholders but also for the benefit of the people of the country from which they derive their profits.

471 In 1940 a Supplementary Agreement was signed between the Ruler and the Bahrain Petroleum Company in which the latter received an extension to its concession including all lands, shoals, reefs, waters and submerged lands of "the present and future domains" of the Ruler of Bahrain.

315 It is a comparatively rare thing for people visiting Bahrain to see the actual oil which has made the Islands famous, gone are the days when to "strike oil" meant that a huge gusher of oil would leap skywards covering everything about it with what is termed, in the hackneyed phrase of the journalist, "black gold." Today the drilling of a well is normally a tidy process ; when oil is struck the drillers have complete control over its flow and quickly cap the well with a "Christmas Tree," the nickname for the mass of taps and valves which are placed over the well head. From the well the oil is piped to the Refinery and then to the storage tanks at Sitra. But in every part of its processing little is seen of the oil except by the workers in the laboratories.

133 The oil industry today is the most important factor in Bahrain's economy and is recognised as such by the Government and the people of the country.

CHAPTER VI

JEWELS OF THE DEEP

228 Pearl diving is probably the oldest industry in Bahrain and has been the reason why an otherwise small and comparatively unproductive group of islands has been the scene of so many bitter wars and has been over-run by so many invading armies. From earliest times Bahrain has been famous for its pearls ; in an Assyrian inscription of some 20[illegible] B.C. a parcel of "fish eyes" from Dilmun is believed to be

there is a deep depression surrounded by large blocks of stone which was once a great spring said to have irrigated much of north-western Bahrain. This spring, known as Ain Sejour, is traditionally associated with the name of the Caliph Abd al-Malik (685-705) who is reputed to have come to Bahrain with an army to chastise the people who had given refuge to politico-religious refugees from Iraq. According to local histories the Bahrainis worsted the invaders in a war by a clever use of the underground water channels and a truce was signed. Later the Caliph is said to have murdered the Bahraini leaders and to have filled in this well "to reduce the pride of the people of Bahrain," since then it has been dry and the land around it has reverted to desert. It seems unlikely that the Caliph himself came to Bahrain, he probably sent one of his generals and later tradition ascribed the leadership to the Caliph himself. 172

Several well-to-do families own houses in Diraz, and when pearling flourished its people were important nakhudas (captains) and pearl merchants. Many of the villagers are still divers and keep their boats on the shore near the little mosque north of Budaiya Garden. For use in these boats the villagers weave their own sail-cloth on local looms. 228 288 554

JESRA

On the edge of the open plain about 4 miles south of Budaiya is Jesra, the point where the pipeline from Arabia crosses to Bahrain, here also is a village whose Arab inhabitants are mainly retainers of the Ruling Family. Several Shaikhs have also built substantial houses in the village, as well as gardens irrigated from artesian wells. Another road leads from Jesra to Rifaa al-Gharbi, following the route of the pipeline across the desert. 315 361 491

MALAKIYA

Four miles south of Jesra the road, after passing through the villages of Karzakan and Dumistan, enters the little village of Malakiya, set in the centre of thriving date gardens, some of which belong to merchants in Manama. The only claim to interest in this village is a large tomb which is held in great veneration by the Shia community of Bahrain and is visited by pilgrims from all parts of the Islands. The tomb is of a certain Amir Zaid, but there is some difference of opinion about his identity. Some contend that he was Zaid bin Sohan, one of the Companions of the Prophet, but according to other local authorities he was a certain Amir Zaid bin Umaira al-Abdi who witnessed a covenant of truce made between the people of the Islands and al-Mua'lla bin al-Hadrami, the Moslem conqueror of Bahrain. A third version is that the worthy Amir was the leader of the people of Bahrain in a war that took place between them and the Caliph Abd al-Malik (See paragraph on Diraz). It has not yet been decided which of these versions is in fact the true one, but this does not deter Shia pilgrims from visiting Malakiya. 361 778

6:Faroughy H-5 (no date)1951 MZ2 Bahrain MZ2

439 In 1944 U. S. imports from Bahrein amounted to $30,859, most of which was classified in Group 9 (Miscellaneous) by the Department of Commerce. Of the total imports the New York Customs District received $27,551, or almost 90%. The total of the exports to Bahrein from the United States in the same year was $12,369,647, of which lend-lease materials accounted for $293,786.

The following table shows the principal articles which Bahrein imported from the United States for the year 1944.

Table 7. IMPORTS FROM UNITED STATES—1944

Item	Value (in U.S. Dollars)
Animals and Animal products	323,846
Vegetables and Vegetable beverages	320,318
Vegetable products (except Wood and Fibers)	155,188
Textile fibers and manufactures	104,808
Non-metallic minerals	545,221
Metals and manufactures (except Machinery)	3,823,521
Machinery and Vehicles (Electric pumps, Engines)	5,434,105
Chemicals and Related products	1,023,226
Miscellaneous	188,129

OIL

471 The oil concession on Bahrein Island is held by the Bahrein Petroleum Company, which is Canadian registered but owned by American companies, 50% by Standard Oil of California and 50% by The Texas Company.[1]

35 After a geological survey the company began drilling in 1931 in the Jabal Dukhān region, and oil was discovered in June 1932 at a depth of 2,009 feet.

382 By 1935 there were sixteen producing wells and six more drilling. At that time more than 10,000 acres had been proved oil bearing and potential production was estimated at 20,000

1. For a detailed account of the history of oil development in the Persian Gulf, see History, p. 103.

8: Qubain S-5 (1952-53) MZ2 Bahrain MZ2

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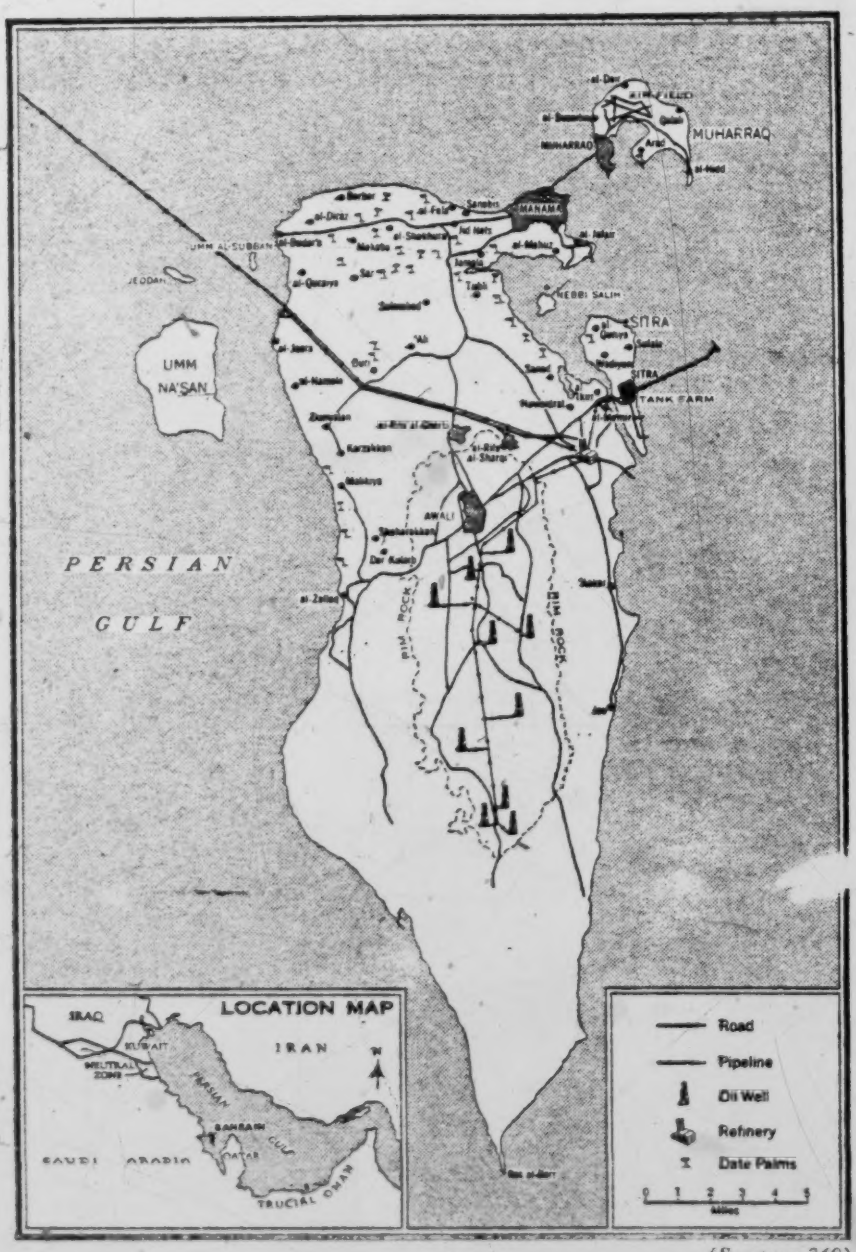

(See page 269)

The Shaykhdom of Bahrain

facing p. 239

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
Bahrain M 2 2

called 'Red Line' agreement of 1928,[1] was unable to agree to conditions that IPC was in a position to dictate; it therefore sold its option to the Standard Oil Company of California. After negotiations in which the British Government and the American State Department both took a hand, the Bahrain Petroleum Company (BAPCO), a subsidiary of Standard Oil, registered in Canada, was allowed to take up the concession provided that, to conform to Britain's prior agreements with the Shaikh, it employed a considerable number of British subjects. In 1936 the Texas Company acquired a 50 per cent interest in BAPCO. These details are given to explain why the present company is Canadian by nationality and American by management, and employs a large proportion of British staff. The two American companies concerned are two of the four participants in Aramco.

Oil was first discovered in Bahrain in 1932 and first exported in 1934. Production was suspended during the Second World War, but since then it has risen to a steady level of 11 million barrels per year. A refinery was erected before the war, and has (since the Abadan refinery ceased to put through its daily 550,000 barrels) been stepped up to a throughput of over 200,000 barrels per day; it includes a catalytic cracking unit for high octane fuel. It is fed both with BAPCO's own production of oil from the Bahrain field and by a 12-inch under-sea pipeline from Aramco's wells in Saudi Arabia. The jetty for loading tankers lies off Sitra Island on the seaward side of Bahrain Island itself.

Originally, the Shaikh enjoyed the same royalty rate as his neighbour in Kuwait—3 rupees and 4 annas a ton, or 14 cents a barrel. In 1951 reports of the new agreements reached by his neighbours caused him to ask for equality of treatment. In 1952, therefore, he signed a new agreement with the company which established the fifty-fifty profit-sharing arrangement now universal on the Gulf. He also enjoys a payment on each ton of Saudi Arabian oil passing through his territory to the refinery. His revenue has risen relatively less than that of his neighbours because the volume of oil produced in Bahrain has for some years been virtually stationary; nevertheless earnings from oil have risen from $1·4 million in 1948 to $3·8 million in 1951 and $6·3 million in 1952, and three-fourths of Bahrain's national income is now derived from petroleum activities. The social and economic changes brought about by this increased wealth are not so spectacular in Bahrain as elsewhere because

[1] See R. F. Mikesell and H. B. Chenery, *Arabian Oil* (Chapel Hill, University of N. Carolina Press, 1949).

63:Simmons et al G-5 (1941-1951) 1954
M1 Middle East
BAHRAIN MZ2

132 The climate is typical of the Persian Gulf region, with intense heat and high humidity for 6 months of the year. According to observations for the 10-year period 1942-51, the maximum temperatures averaged 107° to 109° F. in July and August; the minimum temperatures, 83° to 85° F. Corresponding temperatures for January, the coolest month, were 70° F. and 50° F., respectively. The rainfall, which is normally around 3 inches a year, is distributed irregularly between November and May, with the maximum precipitation from December through February. Sand-laden winds, known locally as the *shamal*, often blow with con-

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p. 255 (B)

THE COMPANY ALSO OPERATES A
refinery on the eastern side of the island, 315
opposite Sitra. It was expanded in 1945, and 382
80 to 85 per cent of the crude oil processed
is now obtained by pipeline from Saudi
Arabia. The refined petroleum products are
pumped to storage tanks on Sitra Island,
and subsequently to a deep-water loading
terminal 3 miles offshore. Over 6,000 Bah- 464
rainis, as well as some 1,600 British and 651
Americans, are employed in different 185
branches of the industry. Two thirds of the
royalties accrue to the Bahrain government,
half of which are utilized for capital ex-
penditures designed to raise the standards
of living of the people. Reports for 1951
indicate that 68 per cent of the government
income was derived from oil revenues, as
against 26 per cent from customs receipts.

The renewed prosperity of the islands and 471
the concurrent growth in population have
stimulated private enterprise and the
growth of small factories to supply current
needs, particularly as regards building ma- 228
terials. Fishing is an important seasonal 241
occupation of many villagers, and pre- 312
served fish, fish oils and other fish products
are items of export. Agriculture plays a
minor role. Barely 5 to 10 per cent of the
total land area is under cultivation, and
further expansion is restricted by the nature
of the terrain, the concentration of water
supply in limited areas and a feudalistic 241
system of land tenure. Date gardens flourish 654
in oases on Bahrain, Muharraq and Sitra
Islands, but the supply equals less than one
quarter of the local requirements. The gov-
ernment is endeavoring to promote the in-
troduction of other crops, and maintains an
experiment station at Budaiya.

The sea approaches to the archipelago are 504
shallow, making it necessary for ocean ves- 505
sels and oil tankers to anchor 2 to 4 miles
from the shore. Bahrain and Muharraq,
however, have good harbors which accom-
modate dhows and other shallow-draft ves-
sels. Manama is an active trading center: 505
coastal traffic is more or less continuous,
while frequent steamer services are avail-
able to the northern Gulf ports and to India
AND PAKISTAN.

occurred intermittently in the past, chiefly in Manama and Muharraq. The islands are exposed to the introduction of the disease from neighboring territories, but the enforcement of quarantine regulations has prevented its establishment for several decades.

Other Infections. Although a mild degree of louse infestation occurs among the inhabitants in some congested areas, louse-borne typhus is rarely, if ever, reported. Imported cases of cutaneous leishmaniasis, or Oriental sore, and filariasis are occasionally treated in the local medical institutions, but the insect vectors are not known to be present, and indigenous infections have not been recorded. Guinea worm infection is sometimes seen among persons from Iran, but it is not found in the resident population.

Nutritional Diseases

The standards of nutrition have improved materially in the last few years. Undernutrition is common, but serious defects are seen primarily among the inhabitants of outlying villages and the families of workers from the mainland. Poverty, traditional dietary customs and intestinal parasitism are contributory factors. Subclinical deficiencies in vitamin C are widespread, and scurvy is observed from time to time. Rickets is frequent among the children in the towns. Anemia is prevalent, and hemoglobin levels of 25 to 30 per cent are not unusual among the women.

SUMMARY

Bahrain is an independent sheikhdom which consists of an archipelago of 5 main islands situated in the Persian Gulf near the coast of Arabia. It has long been famous as a pearl fishing center, and, since 1932, has enjoyed prosperity as an oil-producing area. It has a heterogeneous population which numbered 109,650 in 1950, including 18,471 foreigners. The people are predominantly of mixed Arab and Persian origin, and about 96 per cent are Moslems.

p. 264(B)

64: Shwadran S-4 (no date) 1955 M1 Middle East
Bahrein MZ.24

In 1910 geologists of the British Indian Survey discovered seepages of oil in Bahrein. Coming as it did after the successful discovery of oil in Persia and the organization of the Anglo-Persian Oil Company, there was apparently considerable discussion of oil possibilities in Bahrein. The British pressed the Sheikh for a definite commitment not to permit the exploitation of oil by non-British concerns. On May 14, 1914 the Sheikh wrote the British Political Agent in Bahrein that he would not himself embark on the exploitation of oil in his territory, nor would he entertain overtures regarding such exploitation from any quarters without consulting the British Political Agent and without the approval of the British Government.[2]

Oil, however, was not discovered. In the early 'twenties Major Frank Holmes, representing the Eastern and General Syndicate, was seeking oil concessions in the Persian Gulf area, and as noted above, succeeded in 1924 in obtaining a concession from Ibn Saud in the al Hasa province. On December 2, 1925 Holmes acquired from the Sheikh of Bahrein for his British syndicate an exclusive oil exploitation concession over an area of about 100,000 acres. It was provided that if the concession rights were not exercised within four years, it would lapse. The Syndicate tried to interest British concerns in the concession, but without success.[3] At the end of November 1927 the Eastern Gulf Oil Company, a subsidiary of the American Gulf Oil Corporation, entered into an option contract to purchase the Syndicate's rights in Bahrein, and was given until January 1, 1929 to exercise its option. Gulf, at the time a member of the American group in the Turkish Petroleum Company, had in the meanwhile signed the Red Line Agreement which covered the Bahrein islands, and the Board of Directors of the Turkish Petroleum Company ruled that for Gulf to exercise its option would be a violation of Article 10 of the Agreement.[4] On December 21, 1928 Gulf, with the con-

[2] *Ibid.*, 124.

[3] The following comments from two different directions are interesting: British—"American interests were first engaged almost fortuitously when oil was struck on the Manama Island of Bahrein, after British prospects had failed. The successful company is the one which has subsequently extended its activities to the great Saudi Arabian oil fields." "The Persian Gulf—A Romance," *The Round Table*, XXXIX, 134, Mar., 1949. American—"It was our good luck that the British failed to discover oil which we later found in great abundance." Harold L. Ickes, "We're Running Out of Oil," *The American*, 84, Jan., 1944.

[4] See above, Chap. XI.

64: Shwadran S-4 (no date) 1955 M1 Middle East

Bahrein MZ 2

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64: Shwadran S-4 (no date) 1955 M1 Middle East
Bahrein MZ21

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Negotiations between the Colonial Office and the Syndicate were carried on for about a year and a half. On June 12, 1930 the Syndicate signed an agreement with the Sheikh, and transferred it to the Bahrein Petroleum Company, a Canadian subsidiary of the Standard Oil Company of California. The major provisions of the agreement were: The Bahrein Petroleum Company must remain a British company; one of the directors must be a British subject and *persona grata* to the British Government; the Company's chief local representative must be approved by the British Government and all communications with the Sheikh must be through him and the Political Agent; as many of the employees as was consistent with efficiency must be subjects of Britain and Bahrein.[7]

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Standard of California immediately sent out geologists and drillers. On May 31, 1932 the first commercially-producing well was brought in. Drilling was continued, tanks were built, and in December 1934 the first tanker load of Bahrein oil entered the world market. By 1935 there were sixteen producing wells.

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Standard of California, searching for markets for its increased production of crude, and with the anticipated output from Saudi Arabia, sold one-half of its Bahrein concession to the Texas Oil Company for a half share in the latter's numerous marketing facilities east of Suez. A new company registered in the Bahamas, the California-Texas Company (Caltex), was organized for the purpose of conducting Bahrein's marketing operations.[8]

In June 1940 the Bahrein Petroleum Company (Bapco) received an extension of its concession covering all the lands and other areas under the jurisdiction of the Sheikh, an area of some 1,644,000 acres,[9] for a period of fifty-five years from June 19, 1944.

[7] DeGolyer, *loc. cit.*, 77-79; *Foreign Relations 1932*, II, 5. The British backed down from some of their previous demands but insisted on some of the others. The State Department apparently considered this achievement a victory for American interests and claimed credit for it. In its memorandum to the Senate Special Committee Investigating Petroleum Resources, the Department declared: "Here again the prompt and positive action of the State Department has secured results favorable to an American-owned company. By securing the entry of American oil interests into Bahrein, the way was paved for some American interests to obtain concessions in nearby Arabia." U. S. Senate, *American Petroleum Interests in Foreign Countries*, 23-24.

[8] U. S. Senate, *International Petroleum Cartel*, 79; Chap. XI above.

[9] Faroughy, *The Bahrein Islands*, 111; Sanger, *The Arabian Peninsula*, 147. DeGolyer was of the opinion that the Sheikh delayed granting the extended concession because of the efforts of Holmes in 1937, when he reappeared in Bahrein

64: Shwadran S-4 (no date) 1955 M1 Middle East
Bahrain MZ2

Production

From 1936 production progressed rapidly, reaching the 20,000 barrel per day mark in 1939. During the years 1942-1944 some wells were shut in as a war measure, and production was reduced by some 2,000 barrels per day. By 1951 there were 67 producing wells, with an average per well output of 430 barrels per day. The following table gives production in tons and barrels:

Table XII. *Bahrein Oil Production 1933-1954*

Year	*In Tons*	*In Barrels*
1933	4,000	31,000
1934	39,008	285,000
1935	173,052	1,265,000
1936	635,555	4,645,000
1937	1,058,511	7,762,000
1938	1,138,000	8,298,000
1939	1,041,000	7,589,000
1940	971,000	7,074,000
1941	932,000	6,794,000
1942	856,000	6,241,000
1943	902,000	6,572,000
1944	921,000	6,714,000
1945	1,003,000	7,309,000
1946	1,099,000	8,010,000
1947	1,291,000	9,410,710
1948	1,496,000	10,915,000
1949	1,508,000	10,985,484
1950	1,512,000	11,016,000
1951	1,508,000	11,008,000
1952	1,510,000	11,004,000
1953	1,506,000	10,978,380
1954[10]	1,570,000	10,994,000[11]

and attempted to get a concession for the additional area. For suddenly, in the spring of 1937, the Sheikh halted all negotiations with Bapco for one year. "He finally granted it to the Bahrein Petroleum Company on June 19, 1940, but the British officials distilling the last drop of advantage that could be obtained hooked on a political agreement of June 29, 1940." DeGolyer, *loc. cit.*, 79. "The 'Bahrain unallotted area,' being the difference between the 100,000 acres and the whole extent of the Shaikh's dominions, was from 1934 to 1940 the subject of lengthy negotiations between the Shaikh, Bapco, and another candidate, the Iraq Petroleum Company." Longrigg, *Oil in the Middle East*, 104.

[10] United Nations, Department of Economic Affairs, *Review of Economic Conditions in the Middle East 1949-1950*, 60, henceforth cited U.N., *Review* or *Summary*, and year;—*Review 1951-1952*, 55;—*Summary 1952-1953*, 47; Economic Cooperation Administration, Special Mission to the United Kingdom, *The Sterling Area. An American Analysis*, (London, 1951), 418; *World Petroleum*, X, 43, July, 1939.

[11] United States Senate, *Petroleum Requirements—Postwar. Hearings Before A*

64: Shwadran S-4 (no date) 1955 Ml Middle East
Bahrein M22

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The nature of the Bahrein islands as the commercial port of the Saudi Arabian coast and the Qatar peninsula made it an ideal location for a refinery, and as soon as oil was discovered in commercial quantities in Bahrein and the prospects for Saudi Arabia looked promising, Bapco built a refinery which went into operation in July, 1935. Increased production and the demand for oil for war needs made it necessary to expand the refinery and by 1945 the Company had spent about $27.5 million. By 1951 the refinery had a capacity of 155,000 barrels daily. Most of the crude came from the Saudi Arabian mainland as the maximum of local production was only 30,000 barrels per day. At first the oil was brought by tanker, later it came by way of a 12-inch 34-mile long pipeline, two-thirds of which was submarine. During 1947 another 12-inch pipeline was laid, bringing the total capacity of the pipeline to 126,000 barrels per day.[15] By 1949 about 85 per cent of the refinery's throughput was coming from Saudi Arabia. The output in 1950 was 56,059,000 barrels; in 1951, 8,040,000 tons; in 1952, 8,621,000 tons; and in 1953, 10,408,000 tons. It has been estimated that the parent companies have invested about $75 million in the Bahrein undertaking.[16]

Reserves

Of all the major oil-producing areas of the Middle East, Bahrein was the least promising as regards reserves. From the very beginning the reserve estimates were generally static. In January 1949 they were estimated as 170 million barrels; two years later Faroughy gave them as 200 million barrels; at the end of 1954 they were estimated at 235 million barrels. The United Nations experts estimated the reserves as 40,900,000 tons in 1951 and the same in 1953. Compared to Saudi Arabia and Kuwait, the Bahrein reserves are considered of little significance.[17]

Summary 1950-51, 37-38;—*Review 1951-52*, 58-59; "Oil and Social Change," *The Economist*, 8, July 2, 1955.

[15] For a Company description of the pipeline and the refinery, see "Submarine Pipeline," *Oil Lifestream of Progress*, III, 20, Oct., 1955.

[16] U.N., *Summary 1950-51*, 24; "Oil and Bahrein," *The World Today*, VII, 78, Feb., 1951; Sanger, *The Arabian Peninsula*, 145; Faroughy, *The Bahrein Islands*, 44-45; *Le Commerce du Levant*, Oct. 15, 1954.

[17] U. S. Senate, *International Petroleum Cartel*, 6; U.N., *Review 1951-52*, 53;—*Summary 1952-53*, 40; Faroughy, *The Bahrein Islands*, 111; *World Oil*, CXL, 205, Feb. 15, 1955.